

withdrawn from consideration. The requirement for restriction, to the extent it was stated accurately by the Examiner, was deemed proper and made final.

Each issue remaining is considered separately below.

#### Requirement for Restriction

The Examiner seems to assert in the outstanding Office Action that Group I is a method of controlling body fat in an animal by administering a lipoxxygenase inhibitor. The applicants believe that this is an improper statement of the extent of Group I and maintain their traversal of the requirement for restriction.

In imposing the original requirement for restriction in an Office Action mailed December 28, 2001, the Examiner divided Claim 1 as follows:

Group I: Claim 1 (in part insofar as control of body fat is achieved by the administration of a lipoxxygenase inhibitor) ...

Group II: Claim 1 (in part insofar as the control of body fat is achieved by the administration of conjugated linoleic acid) ...

After reconsidering the claims as amended by the applicants, the Examiner combined Claims 10-19 from Group II into Group I (see Paper No. 7). Arguably, this leaves in Group II only Claim 1 in part insofar as the control of body fat is achieved by the administration of conjugated linoleic acid. Applicants point out, however, that that is not a recitation of Claim 1, which has as its only method step the step of reducing lipoxxygenase activity in the animal. As the applicants noted on the final full paragraph of their Response mailed January 28, 2002, there is no indication in the art that CLA reduces body fat by reducing lipoxxygenase activity. Hence, no claims remain in Group II and Claim 1 must be examined across its entire scope as part of Group I.

In discussing the requirement for restriction with the undersigned, the Examiner stated that the basis for removing Claim 15 from the group is that reducing the lipoxxygenase level is very different from administering lipoxxygenase inhibitors to inhibit the enzyme. The Examiner suggested in a telephone interview that Claim 15 was not being considered because of the possibility of a different response such as increased activity when the lipoxxygenase enzyme level is altered. Applicants simply see no good reason for imposing a requirement for restriction on these grounds.

As Claim 15 is but one embodiment of Claim 1, it too should be within the scope of Group I. Applicants see no principled basis for distinguishing those embodiments of Claim 1 that relate to administering a lipoxxygenase inhibitor from those embodiments that relate to lowering lipoxxygenase level. Both approaches fall within the scope of Claim 1, now under examination. Notably, Claim 2, like Claim 15, could readily depend from Claim 1, as both Claims 2 and 15 describe embodiments of generic Claim 1 drawn to reducing lipoxxygenase activity in the animal.

Any grounds for unpatentability (such as some hypothetical, speculative effect resulting from a change in enzyme level) should be stated under Sections 101, 112, 102, or 103. If the Examiner doubts the scientific basis for the claim, it is the Examiner's obligation to impose a substantive rejection and to provide written support for that rejection. Unfortunately, if the requirement for restriction is maintained, the Examiner will not have to meet that burden and the applicants will not have an opportunity to respond.

Separately, the Examiner asked the applicants to elect a single lipoxxygenase inhibitor for examination purposes. Applicants elected NDGA. To the extent that it is the Examiner's position that NDGA is not used to lower lipoxxygenase level in the animal, this must be clearly stated on the record as a ground for withdrawing certain claims from consideration.

Finally, the Examiner indicated that because a wide variety of compositions are useful in the claimed methods, the search of the methods encompassed by the claims presents an undue burden to the Office. Applicants seek clarification as to how the separate classification of structurally distinct compounds has any bearing at all upon the use of those unrelated compounds in a claimed method. Applicants remind the Examiner that every pending claim is a method claim and that no claim is drawn to a composition. The fact that compositions used in the method may be separately classified and patentably distinct does not render methods for controlling body fat in an animal similarly distinct.

Although the requirement for restriction is made final, it is the applicants' strong belief that the basis for the requirement for restriction is flawed and has not been fully considered by the Examiner. For that reason, reconsideration in view of the arguments presented above is again respectfully requested.

Rejections Under 35 U.S.C. §103(a)

The Examiner rejected Claims 1-8, 10-14 and 18 under §103 as being unpatentable over Khandwala et al. and Park et al. The Examiner states that Khandwala et al. teaches that NDGA is known to be useful in reducing cholesterol and triglyceride level. The cited excerpt from Column 3, lines 23-35 of Khandwala et al. indicates that NDGA has been reported to reduce cholesterol and triglyceride levels, specifically hyperlipidemia, quoting US Patent Number 3,934,034. It is clear from Khandwala et al. and from the quoted patent that NDGA is known to reduce cholesterol and triglyceride levels in the blood, but the cited art simply makes no statement about NDGA's effects or lack thereof on body fat.

In the art, "body fat" is understood to refer to something other than triglycerides in the blood. "Body fat" refers to lipids stored within an adipocyte or fat cell. The hormone-driven mechanisms by which adipocytes take up free fatty acids and release triglycerides are well characterized. Briefly, triglycerides in serum are acted upon by lipoprotein lipase to produce free fatty acids that can be taken up by adipocytes and converted into triacylglycerides ("fat") for storage. Adipocytes release lipids in the form of triglycerides into serum only when the triacylglycerides undergo lipolysis, a process driven by hormone-sensitive lipase. It is known from the cited art and elsewhere that lipoxygenase inhibitors, including NDGA, block lipolysis and thereby reduce triglycerides in serum.

What is not known, and is surprisingly shown by the applicants, is that a lipoxygenase inhibitor that blocks lipolysis and prevents fat cells from draining lipids, also inhibits lipoprotein lipase and thereby reduces free fatty acid uptake and consequent fat storage by adipocytes. It is, therefore, surprising and unexpected that a lipoxygenase inhibitor would reduce body fat. It would have been the expectation in the art that, by blocking the drain of fat from adipocytes, lipoxygenase inhibitors would have increased body fat stored in adipocytes. The applicants' claims run directly counter to the expectation of the art and are supported by the data of the specification, particularly that of Table 4.

The Examiner also points out, without explanation, that Khandwala et al. teaches that NDGA is useful in reducing body weight in mice, directing the applicants to Table 12. The Examiner's point is not well understood. First, a reduction in weight is not necessarily related in any way to a reduction in body fat and absent some showing in the cited art that NDGA controls body fat, the reliance on this reference is misplaced. Further, the cited patent

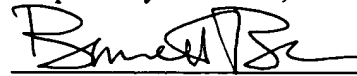
contains no Table 12. None of Tables 1 through 4 of the cited patent appear to relate in any way to control of body fat.

In formulating the rejections, the Examiner combines Khandwala et al. with Park et al. The applicants do not dispute that Park et al. teaches that CLA is known to reduce body fat in mice. As noted above, however, the claims relate primarily to reducing lipoxxygenase activity. This is not an attribute of CLA. Rather, as is detailed in the specification, CLA exhibits synergistic effects on body fat control when administered in combination with a lipoxxygenase inhibitor, as in Claims 10 and its dependents. For the reasons noted above, it would not have been obvious to the skilled artisan to reduce the lipoxxygenase activity in an animal to control body fat. It cannot, therefore, have been obvious to control body fat by both reducing lipoxxygenase activity and administering CLA. It is not true, as stated by the Examiner on page 5 of the Office Action that NDGA is known to be useful for controlling body fat. Nor is this a situation of merely combining two agents known to be useful for reducing body fat individually into a method useful for the very same purpose. Accordingly, the claimed invention is not *prima facie* obvious and the Examiner has not met his burden.

Reconsideration is respectfully requested.

No fee is believed due in connection with this response, however, should any fee be due in this or any subsequent response, please charge the fee to Deposit Account No. 17-0055. Likewise, no extension of time is believed due, but if an extension of time is required in this or any subsequent response, please consider this to be a request for the appropriate extension of time and a request to charge the fee due to the same deposit account.

Respectfully submitted,



Bennett J. Berson  
Reg. No. 37,094  
Attorney for Applicants  
QUARLES & BRADY LLP  
P.O. Box 2113  
Madison, WI 53701-2113

TEL (608) 251-5000  
FAX (608) 251-9166

QBMAD\338955.1